	Page 1
1	UNITED STATES DISTRICT COURT
2	FOR THE NORTHERN DISTRICT OF CALIFORNIA
3	SAN FRANCISCO DIVISION
4	000
5	IN RE: DA VINCI SURGICAL Lead Case No.
3	ROBOT ANTITRUST LITIGATION, 3:21-cv-03825-VC
6	/
7	SURGICAL INSTRUMENT SERVICE
	COMPANY, INC.,
8	
	Plaintiff,
9	vs. No. 3:31-cv-03496-VC
10	INTUITIVE SURGICAL, INC.,
11	Defendant.
	/
12	
13	
14	
15	(HIGHLY CONFIDENTIAL - ATTORNEY'S EYES ONLY)
16	VIDEOTAPED VIRTUAL VIDEOCONFERENCE
17	DEPOSITION OF SHARATHCHANDRA "SHARK" SOMAYAJI
18	November 4, 2022
19	
20	
21	
22	
23	Reported by: Kimberly L. Avery, CSR No. 5074
24	Job No. 5563382
25	Pages: 1 - 150

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3	EXAMINATION B	Y MR. VAN HOVEN	8
4	EXAMINATION B	Y MR. GLUBIAK	141
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10		EXHIBITS	
11	PLAINTIFF'S		PAGE
12	Exhibit 201	LinkedIn profile for	13
		Sharathchandra Somayaji	
13			
	Exhibit 203	E-mail chain ending with	41
14		e-mail dated August 2,	
		2017 from Don Brandt to	
15		Mike Prindiville, et al.	
		Intuitive-00602553 - 556	
16			
	Exhibit 205	,	45
17		2017 from Shark Somayaji	
		to Jennifer Peterson	
18		Intuitive-00602580	
19	Exhibit 206	Document entitled "In Re:	50
		da Vinci Surgical Robot	
20		Antitrust Litigation,	
		Electronic File Exhibit	
21		Placeholder"	
22	Exhibit 207	E-mail chain ending with	51
		e-mail dated January 29,	
23		2018 from Shark Somayaji	
		to Karpaga Sundari, et al.	
24		Intuitive-00602758 - 2759	
25			

Page 23 And as a director of NPI engineering, what 1 0. 2 was your role with respect to Xi instruments? 3 My role as a director was to manage and 4 maintain Xi 8 millimeter instrument lines and look 5 at the sales or the output that is needed from our 11:53 production team, and if duplicate lines were 6 needed, we would be duplicating lines. 7 8 0. To handle extra demand, additional demand 9 for instruments? That is correct. 10 Α. 11:54 11 And most of those lines were similar to 0. 12 lines that you had possibly designed at the time you worked as an NPI manager previously? 13 That is correct. 14 Α. 15 0. And in April 2021, you became a senior 11:54 16 director of manufacturing engineering? 17 That is correct. **A** . How does that role compare to your 18 Q. previous role as director of NPI engineering? 19 20 Let me explain the role. 11:54 Α. 2.1 As the senior director of manufacturing 22 engineering, I am in charge or responsible for our entire instruments and accessories manufacturing 23 24 engineering aspects for our Xi and Si portfolio. 25 Who do you report to as a senior director 11:55 Q.

	Page 58	
1	number of procedures this Xi instrument can work	
2	on.	
3	Q. And that's something that is programmed	
4	into a memory location of the RFID tag?	
5	A. That is correct.	6
6	Q. Do you know if that is read only memory?	
7	A. That I do not know let me clarify.	
8	No, it's not read only memory.	
9	Q. What kind of memory is it?	
10	A. One-time programable memory. 12:5	7
11	Q. What is one-time programmable memory?	
12	A. You can program it only once.	
13	Q. And you can't change it?	
14	MS. CAHOY: Objection to form.	
15	THE WITNESS: So one-time programmable 12:5	7
16	memory, the way it works is it's a one-directional	
17	stream. I can decrement, but I cannot increase.	
18	BY MR. VAN HOVEN:	
19	Q. Got it.	
20	So you can't change it, but you can only 12:5	7
21	decrement a number?	
22	A. That is correct.	
23	Q. I'd like to go to the next slide, which is	
24	slide 5.	
25	A. Josh, you did go through slide 3, but 12:5	7

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1	different encryption used on the Si Dallas chip	
2	versus the Xi RFID chip?	
3	A. That is correct.	
4	Q. Is that the reason why at this time you	
5	believe that Xi is impossible? 14:27	
6	A. That is correct.	
7	Q. Talk for a second about the data that's	
8	stored on the Xi RFID chip.	
9	A. Uh-huh.	
10	Q. You talked a little bit about calibration 14:28	
11	values.	
12	A. That's correct.	
13	Q. Remember that?	
14	A. Yup, I did.	
15	Q. And those are values that are passed from 14:28	
16	the chip when it's energized by the robot?	
17	A. Yes.	
18	Q. What would happen if those calibration	
19	values were zeroed out?	
20	A. If those calibration values were zeroed 14:29	
21	out, the robot would not know where the zero	
22	position of the instruments are, like for the	
23	tips, and you would have imprecise motion.	
24	Q. Are you aware of anyone ever attempting to	
25	change calibration values of an Xi instrument? 14:29	

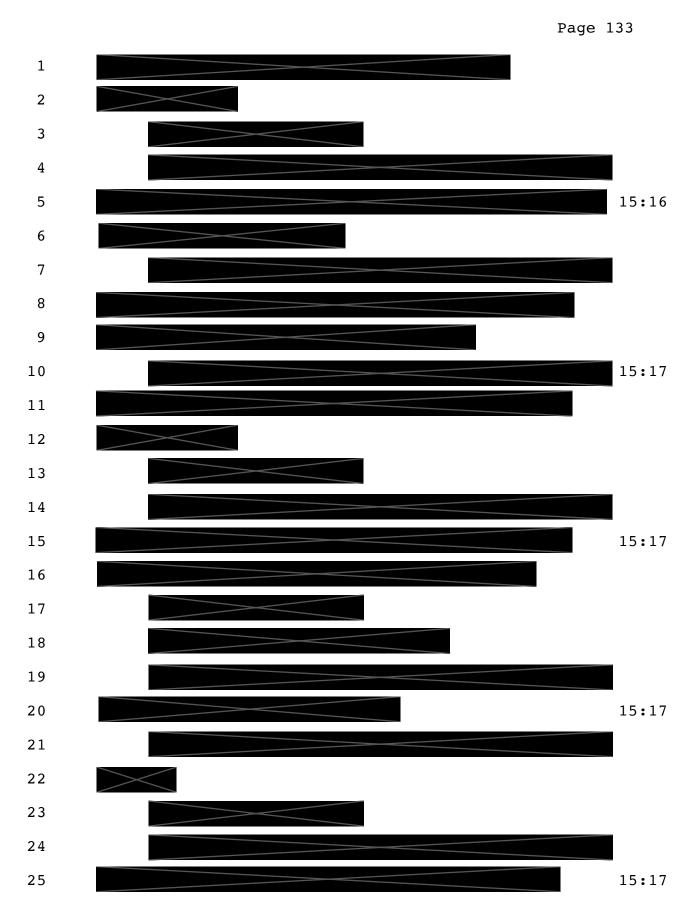
	Page 111
1	A. I am not aware of that.
2	Q. Something you've never heard of?
3	A. I have never heard of that outside of
4	Intuitive, no.
5	Q. That wouldn't make any sense to do, would 14:29
6	it?
7	A. Changing the calibration to the offsets of
8	an instrument would be wouldn't make sense.
9	Q. Why not?
10	A. The reason for that is, calibration is 14:29
11	done through calibration algorithm. So you have
12	to understand the zero positions of these
13	instruments and how it corresponds to equivalent
14	values on the robot.
15	So it is it takes several steps to get 14:30
16	that right.
17	Q. But changing that is just something no one
18	would want to do, right?
19	MS. CAHOY: Objection to form.
20	THE WITNESS: I would want to know why 14:30
21	anyone would want to tamper with the calibration
22	of an instrument.
23	BY MR. VAN HOVEN:
24	Q. Because you'd want those values to be used
25	by the robot to operate the instrument, right? 14:30

	Page 123
1	A. Yes.
2	Q. Do you have an understanding of what it
3	would be referring to to be hacking the chip you
4	use?
5	A. Yes. 14:48
6	Q. What's your understanding?
7	A. My understanding would be trying to break
8	into the RFID chip and the encryption.
9	End of the day, these are all encryptions.
10	So encryptions have a computer limit, 14:48
11	right? Like, there is processing power that's
12	needed, and you have to try combinations. And I
13	am thinking they are saying there's an opportunity
14	to hack into our RFID chip. Doesn't mean it's
15	done, but that's true for all cryptography, right? 14:48
16	Like, any encryption can be end of the day
17	broken.
18	Q. It's just a matter of computing power and
19	effort, right?
20	MS. CAHOY: Objection to form. 14:49
21	THE WITNESS: I would think so. Again,
22	not the subject matter that I'm aware of.
23	You should talk to Onur.
24	BY MR. VAN HOVEN:
25	Q. But that's your understanding, that it's a 14:49

Page 132 3:02 p.m. We are going off the video record. This concludes Media Unit No. 3. (Break taken.) THE VIDEOGRAPHER: The time is now 3:15 p.m. We're going back on the video record. 15:15 This will begin Media Unit No. 4. BY MR. VAN HOVEN: I'd like to ask a few more questions about Q. 15:15 15:15 15:16

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15:16

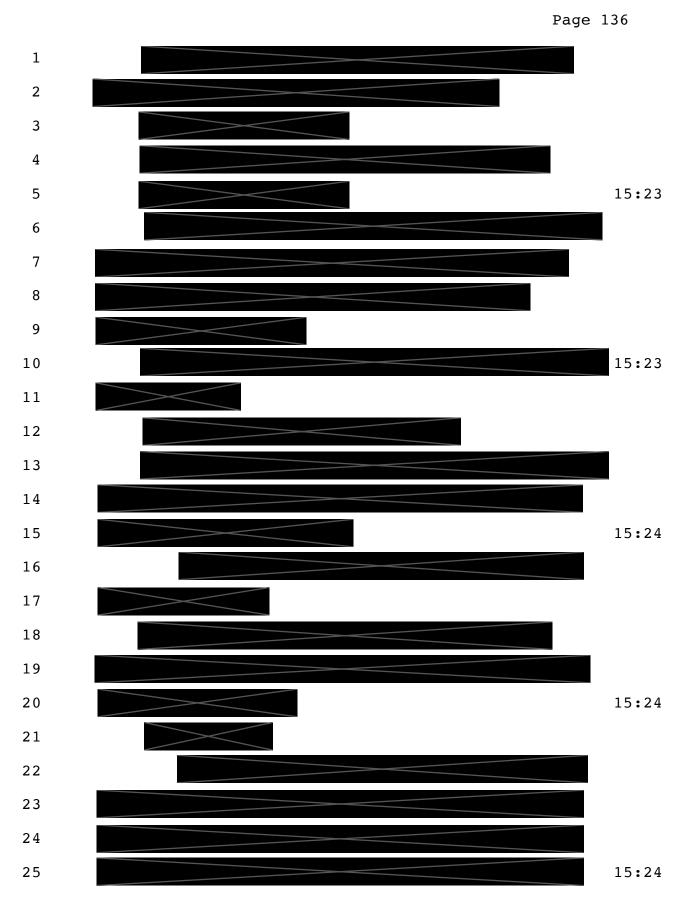


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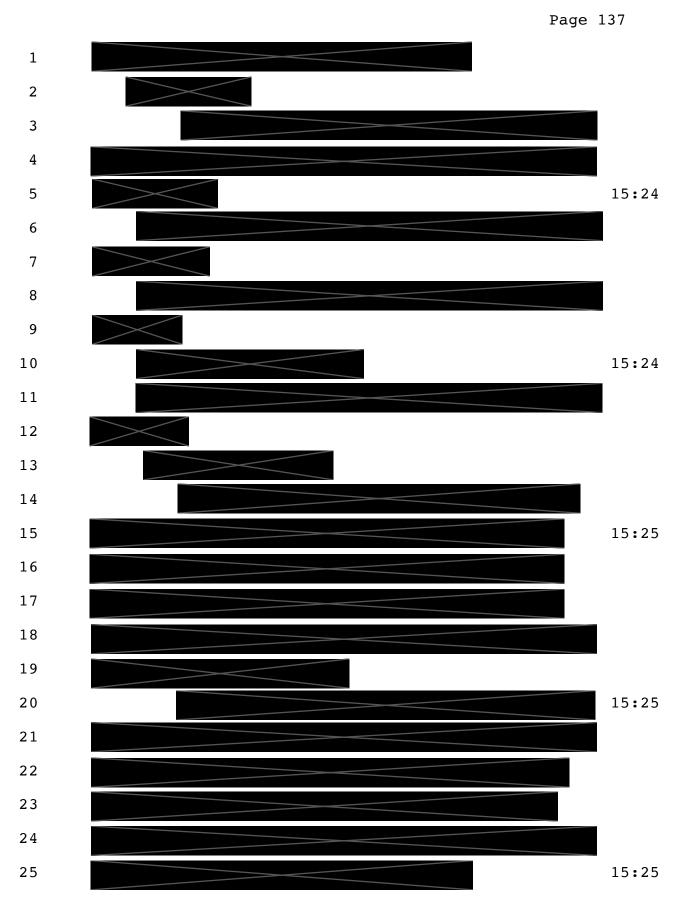
Page 134 1 2 3 4 5 15:18 6 Α. That is correct. 7 Have you heard of that PCB referred to as Q. a PIC? 8 9 So the PIC or PCA? Like, PCBs and PCAs Α. 10 are interchangeably used. So PCA is printer 15:18 11 circuit assembly; that's probably what you have 12 heard. THE REPORTER: I'm sorry, that's what? 13 14 THE WITNESS: Printer circuit assembly, PCA, is word probably he has heard. 15 15:18 16 PIC is a chip that gets -- a particular 17 company that makes chips, which is Microchip. 18 MR. VAN HOVEN: Got it. 19 So I'm going to bring up as Exhibit 227 20 Tab 34. 15:19 21 (Plaintiff's Exhibit No. 227 Marked for 22 Identification.) BY MR. VAN HOVEN: 23 I'll represent that this has the Bates 24 25 number Intuitive-01004230 --15:19

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Page 135 1 Uh-huh. Α. 2 -- in the first page. 0. 3 Is this an e-mail from Cliff Bargar? Α. 4 Q. Yes. Correct. 5 15:19 Α. Thank you. Please take a look, and let me know when 6 Q. 7 you are ready to discuss this e-mail. 8 I am ready, Josh. Α. 9 Q. And does this e-mail -- this is an e-mail chain from Cliff Bargar to yourself and Harsukh 10 15:21 11 Ratia, on May 28, 2020; is that right? 12 Α. That is correct. 13 14 15 15:22 16 17 And in the e-mail from -- from Cliff to 0. 18 you and Harsukh, what do you understand Cliff to be presenting to you here? 19 20 15:22 21 22 23 24 25 15:23



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		_
		15 : 26
А	. That is correct.	
Q	. And you'll note that there's some	
attach	ments to this document?	
A	. It is	
Q	. I'm just talking I'm just talking about	15:26
in the	in the e-mail itself, it references	
attach	ments?	
А	. That is correct. Correct.	
Q	. And so I'm going to pull up as exhibit	
before	I do that, you'll note that the first	15 : 26
attach	ment is called	
	in the in the	
e-mail	itself.	
A	. Hold on.	
	MS. CAHOY: Counsel, are you referring to	15 : 27
the "A	ttachments" line under "Subject"?	
	MR. VAN HOVEN: Yeah, the "Attachments"	
line u	nder "Subject."	
	Thank you, Kate.	
	THE WITNESS: Got it.	15:27

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